

BRIEFING PAPER

June 2017

One Health: a cost-efficient way to protect lives, livelihoods and planet



One Health is not just a better way of protecting animal, human and environmental health. It is also financially strategic – a way for governments to cut spending on health and infrastructure in the long run. If governments take the step of investing in robust health systems up front, they will reduce the enormous amounts currently spent on emergency response. This approach makes sense socially, politically and economically. Now governments need to step up and take action for the sake of people and planet, now and in generations to come.



Introduction: Africa's creaking health systems pose danger for millions

Health services in many countries across Africa are underfunded, poorly equipped and fall far short of the basics needed to serve a rapidly growing population. Decades of underfunding, poor transport networks, outdated equipment, substandard facilities, and inadequate drug supplies have left many health services in a woeful state.

The research sectors in many countries fare little better. For many years, a focus on primary schools at the expense of secondary and tertiary education left universities under-resourced and unable to undertake the research needed to tackle local and national problems.

Low budgets and political short-termism lead many governments to resist funding health systems and disease research properly until they are forced to – that is, until a crisis occurs.

The Ebola crisis of 2014-2016 is one example of this. The outbreak revealed the devastation wrought when governments fail to ensure robust health systems and local mechanisms for detecting and monitoring disease.¹

This approach is also far more expensive than investing more moderate sums in a systematic fashion before catastrophes occur. The World Bank estimates the West African

Ebola epidemic cost Guinea, Liberia and Sierra Leone \$1.6 billion.²

It also leaves African countries relying on external organisations to carry out disease research, which can mean that research is framed in such a way that it prioritises external needs – how to prevent a global pandemic, for example – rather than local and national needs.

“The natural reaction is to react to a catastrophe rather than prevent a catastrophe. But prevention is far cheaper and safer for all”

**– Professor Mark Rweyemamu,
Director, Southern African Centre
for Infectious Disease Surveillance
(SACIDS)**

Solving Africa's problems in a more sustainable, locally owned way, unfettered by external influences

But there are other, more sustainable ways for Africa to solve its own problems, at a fraction of the cost of crisis management.

The Southern African Centre for Infectious Disease Surveillance (SACIDS) is an African-led organisation working on overhauling Africa's capacity to detect, monitor, treat and prevent disease.

At the heart of SACIDS work is a commitment to 'One Health'. One Health promotes

¹ [Melissa Leach on the socioeconomic and historic reasons for distrust in health interventions](#) (SciDev.Net, 26 April 2015)

² Mark Rowland Thomas [Estimating the economic cost of Ebola](#) (World Bank, 2 February 2015)



research and action that looks at the health of humans, animal and environment together. It brings together researchers and communities from different sectors to research how to detect, diagnose and prevent disease. Researchers pool their knowledge, skills and experience to come up with solutions to old and emerging problems facing African countries.

Most research still takes a very different approach. Conventional science and health programmes tend to treat animal, human and environmental health separately, making treatment less effective and damaging health.

This can result in measures that fail to control or prevent disease in the most effective way, with devastating effects on local livelihoods and national economies.

One Health not only safeguards lives and livelihoods. It is also a far cheaper way for governments to invest in public health: by strengthening health systems up front, they will create a healthier population and systems better equipped to control disease outbreaks.

Working together across sectors

One Health studies animal, human and environmental health together. For example, One Health research on Malignant Catarrhal Fever, a disease that can devastate livestock in East Africa, doesn't just look at the effect on cattle. It looks at why the disease moves between wildebeest and cattle, the effect of climate change and urban development on disease incidence, the attitudes of the Maasai to the disease, and what can be done to prevent and control outbreaks.

It combines animal, biological, environmental and social sciences to consider all aspects of a disease outbreak.

This approach is vital for health, but it is also vital for economies – improving local and national knowledge, livelihoods and trade.

“Over and above looking at vaccines, we need to strengthen health systems - because if we don't the cost will be likely much more expensive.”

**Professor Mark Rweyemamu,
Director, SACIDS**

Prevention not cure

One Health is financially savvy: when you protect the health of animals, humans and environment, you protect livelihoods and the resources we all need to thrive.

Building up health systems and local clinical capacity lacks the headline-grabbing glamour of designing a new vaccine or making an epidemiological breakthrough. But it is the bread and butter needed to save lives.

Every dollar spent to build resilience and capacity for detecting and preventing disease saves millions of dollars over time.

If countries and regions don't have systems in place to detect, identify and monitor disease



early, the cost later on will be much higher. This is the case whether you're dealing with Ebola in West Africa or Rift Valley Fever in the Maasai Mara.

It is vital to engage local people, take their views on board and build local knowledge on disease control. If the Maasai and other pastoralists were better equipped to detect, prevent or limit the impact of Malignant Catarrhal Fever and other devastating diseases, they'll be far more able to protect their livelihoods.

“Prevention rather than cure is far cheaper. Of course this doesn't make a lot of headlines, but it's where everything needs to start.”

**Professor Mark Rweyemamu,
Director, SACIDS**

Spend a little now, save millions later

This doesn't kind of approach doesn't have to cost an arm and a leg - far from it.

SACIDS has been developing low-tech solutions to building up skills and access to disease diagnostics, even in far flung rural areas.

“It doesn't mean huge laboratories in the

middle of nowhere,” says Rweyemamu.

Instead cheap, ubiquitous tech such as smart phones can transform the speed, efficiency and accuracy of detecting and identifying disease in remote parts of Africa.

Technology can also help rein in spending on disease mapping in other ways. SACIDS has been using cheap technology and epidemiological modelling to map high risk areas for Rift Valley Fever, for example. The team identified high risk areas in Kenya and Tanzania, enabling vaccinations to be targeted in these places. This is far cheaper than vaccinating everywhere.

Another example is the treatment of rabies. Vaccinating humans is very expensive and out of the question for most African governments. Another solution is to vaccinate dogs: 99 per cent of human rabies cases are from dog bites. Research shows that if you vaccinate dogs in a focused manner, this is far cheaper and is effective for limiting the disease in humans.

SACIDS has been working hard to develop knowledge and tools to prevent crises and make disease diagnostics more robust and accessible. The tools are out there to prevent catastrophes in a way that saves millions of dollars in the long run.

What is now needed is the will of governments to step up, take bold, intelligent decisions, and save lives – as well as their wallets.



6 reasons why policymakers should support One Health:

- **It makes financial sense:** every cent spent improving health and building resilience saves thousands of dollars in the long run
- **Efficiency:** It is far more efficient than other types of research and programmes, and creates much greater health security
- **Health:** It improves human health and saves lives
- **Environment:** It safeguards Africa's vital wildlife and protects the environment upon which millions depend for life and livelihoods
- **Leadership:** It positions Africa as a leader in a vital, growing field
- **Future well being:** It protects the wellbeing of future generations

6 ways policymakers can support One Health:

- **Take One Health seriously:** SACIDS can help policymakers gain a richer understanding of One Health and why it makes economic sense
- **Take into account the health of *all* species** when drawing up policy and development plans
- **Develop systems** for creating policy across sectors, taking into account different challenges and needs, and across borders
- **Invest in disease prevention**, rather than short-term fixes *after* crises break out
- **Support the collection** of transdisciplinary, cross-sector evidence
- **Create One Health platforms** bringing together scientists and government officers from across ministries, sectors and disciplines

Notes to editors:

- [SACIDS](#) (the Southern African Centre for Infectious Disease Surveillance) is a virtual centre with a physical base at the Sokoine University of Agriculture in Tanzania. It was established in 2008.
- Funders: Wellcome Trust Grant WT-087546/Z/08/D and IDRC Grant 107030-00
- All photographs © Ivan Gonzalez
- Written by Imogen Mathers from imogenmathers.com
- For more information, please contact Yunus Karsan on yunus.karsan@sacids.org